

ORGANIZING COMPETITIVE INTELLIGENCE OF
TELECOMMUNICATIONS COMPANIES IN
MALAYSIA

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ABSTRACT

The aim of this research is to organize Competitive Intelligence (CI) in the context of telecommunications companies in Malaysia. Rapid change of competitive landscape due to liberalization in telecommunications industry introduced a lot of new competitions to these companies. Such a study is important in order to discover the best CI program that can help local telecoms to gain new competitive advantage while sustaining the current market position. This research project was based on the review of relevant CI literature and a case study focusing on current CI state in local telecoms. CI best practices recognized from this study were then applied to processes in the intelligence cycle concerning local telecommunications companies. Findings from the gap study between the current CI state and the best practices suggest the local telecoms to change their perception towards CI including to redefine the CI mission, create a hybrid organization structure, leverage current potentials as much and overcome the obstacles in order to maximize the benefit provided by CI. This research also recommends several actionable items to lead CI program in local telecommunications companies towards the competitive enterprise with reference to their current CI state.

Keywords: *competitive intelligence, telecommunication, Malaysia, organizing*

EXECUTIVE SUMMARY

Competitive Issues:

Telecommunications companies in Malaysia are facing a variety of competitive issues as a result from market liberalization. Currently three major service providers are dominating the telecommunication space. With the quite evenly market share distribution (refer to details in chapter 1.2), competitions in every possible way are taking off among the players to expand their market share.

The most immediate threats (refer to chapter 1.3 for details description) to these companies are dropping of ARPU, high customer churning rate, regulatory policy change and new entrants that introduced new competition (e.g. MVNO, MNP). Stiff competition had force existing service providers engaging in price war in order to expand the customer base from the almost saturated market. These trends and pressures shift telecoms emphasis to customer-oriented service that did not exist before where customer needs becomes the central focus of the service provider's activities.

In middle to long term, this industry is facing the emerging of new communication standard such as WiMAX and IMS that concentrates on broadband and IP-based traffic. Local telecoms have to bear the risk and to bet for the best business move under such rapid technology transition.

With the fraction of multiple systems and inflexible IT infrastructure inherited from the historical network-centric business model, service providers are struggling with their existing patchworks of general-purpose information solutions to store and analyze the mountains of data they create every day in providing the better insights of their business.

Due to the slimmer profit margin, local telecoms are looking for new capabilities and revenue stream through partnering, M&A and oversea investment. Each investment bears the different risks and opportunities compared to the incumbent's traditional activities and all these need systematic monitoring and analysis.

With the expensive infrastructure investment, local telecoms' long term technology direction is particular sensitive to the active restructuring activities of technology vendors. Therefore, suppliers' intelligence is crucial to protect them from making inappropriate decision.

Methodology:

In recommending an appropriate Competitive Intelligence (CI) program for local telecoms, firstly a case study was carried out to explore the current intelligence creation activities in these companies. Secondly, review of CI practices provides guidance to identify all possible activities in the intelligence cycle that are relevant to an appropriate CI program in local telecoms.

Next, comparison between an appropriate CI program and the current intelligence state leads the way to discover the potentials and obstacles those companies currently are facing, thereby providing direction on how to organize the CI program that can well match the competitive landscape and intelligence needs.

Findings:

There are large scopes of concerned topics that impact competitive position of local telecoms whereas only limited areas such as customer intelligence, competitor actions, better service quality and market positioning were treated with higher priority (refer to chapter 3.2 for details analysis).

Data management technique was more established for structural information stored at in-house database concerning customers and transactional data but not to non-structural data. Up to now, there is no systematic way to manage external information in non-structural format. This deficiency has tendency to miss out the important competitive messages or innovations with critical business impact.

Importance of CI grows faster than ever due to the increasing of dynamic and global nature of telecommunication markets, which increases the need for quality information in many organizational functions to support decision making. It is a big plus to promote CI initiative.

With decreasing ARPU and fierce price war, CI capabilities in providing early warning alerts and discovering innovation that embedded in the large amount of information has high potential to be the strategic innovation tool for decision makers in telecommunications companies to outperform their rivals.

Success of CI lies on discovering the real intelligence needs from management as the involving competitive variables are rather wide in this industry. On the other hand, senior management was still not enthusiastic to use intelligence making decision. This may affect the CI budget, activities, enterprise-wide implementation and strategic focused on competitive issues.

There exist few functions that producing intelligence such as customer insights and market reports for decision making quite some time within local telecoms. This capability should be leveraged by widening the intelligence scope and extending the CI usage to entire enterprise.

Software applications that can assist activities in CI cycle processes are more mature now. Instead of over-dependent on single tools such as data mining software for gaining insights from in-house database, local telecoms have yet to accelerate intelligence creation by investing in CI related tools.

Local telecommunications companies have not fully exploited the power of intelligence. Currently the intelligence outcomes were limited to answer management questions in the scope of “why” but not about “how” to proceed further. Desired of strategic intelligence needs was still low. In opposite, business focus sided to tactical and operational intelligence concerning market expansion and price competition.

Shortage of CI professional skills to execute processes in the intelligence cycle is still a common issue. Substantial effort is needed to ramp up the human resources with CI skills and build up a certain size of human network that can contribute to intelligence creation activities.

The corporate culture that values the production of intelligence and encourages employees throughout the organization to be a part of the activity is not yet common in local telecommunications companies. Company must regulate policies to appreciate knowledge and intelligence outcomes before CI can gain its significance in decision making.

CI practitioner has to find a proper evaluation standard to link the value of CI program to ROI so that its benefit is more visible as senior managements in local telecoms are now very cautious about revenue and cost.

By targeting as analytical competitor company for sustainable competitive advantage with enterprise-level CI usage, local telecommunications companies must anticipate paradigm shift from competitive-orientation to innovative-orientation with the help of CI in decision making.

Recommendations:

1. *Provide CI education to users constantly.* Senior managements and employees across organization require continuous education on the skills and business impacts brought by CI. Not only to improve their CI competency but to move the mental model of the people towards culture of new knowledge creation that can stimulate higher growth.
2. *Select a right CI program manager immediately.* This key person is responsible to design the CI functions, propose the CI organization structure, plan budget, conduct recruitment, evaluate CI assessment standard, kick-off the CI activities and drive CI functions towards a greater objective with huge impact in return.
3. *Establish the guidelines for CI program.* It has to ensure that the intelligence cycle begins and ends properly with the systematic processes and procedures during execution. The convincing CI program needs a proper assessment method to affirm the benefit of CI especially in gaining return of investment.
4. *Consolidate the fragmented structure of intelligence activities.* Integration of various intelligence functions into centralized unit within local telecoms is necessary for stronger synergy in intelligence creation process. The centralized CI unit has to support current tactical and operational decision needs in addition to strategic questions that can impact companies in the long run.
5. *Build the human network* with representatives from internal and external entities as the part of CI agents. In supporting this, telecommunications companies have

to allocate substantial rewards and incentives to encourage participations and contributions in CI program.

6. *Increase CI tools investment.* With the rapid growing of environmental and operational data, CI team can only discover intelligence by mean of timeliness and thoroughness if they are equipped with the appropriate CI tools.

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CHAPTER 1

1 INTRODUCTION

The growth of the service sector in national economies has brought telecommunications into the spotlight. The importance of telecommunications as a service industry by itself as well as a critical support element for other industries is now the focus of high level policy formulation in practically every country in the world. This has led to changes such as the separation of telecommunication operations and regulations, privatization of telecommunication operators and the introduction of competition. Interest in telecommunications now extends beyond technical people to include government officials, economists, lawyers, banks, users and the press.

In Malaysia, service sector contributes about 53.2% of GDP and the biggest growing engine for the national economies¹. The Malaysia Third Industrial Masterplan (IMP3) has outlined the key strategic thrusts to transform the country into a fully developed nation by 2020. It aims at improving the country's global competitiveness through the transformation and innovation of the services industries and manufacturing. As a GDP contributor (3.8% in 2007) as well as support element, the effectiveness and competitiveness of telecommunication industry has significant impact to the growth of service sector and indirectly the national GDP. A research conclusion (Jacobsen, 2003) has indicated that there

¹ GDP data of 2007 published by Department of Statistics, Ministry of Finance Malaysia.

is a significant correlation between telecommunication and GDP growth especially in developing countries.

Due to the globalization, telecommunications companies in Malaysia and other countries could possibly encounter the most changes in their market environment as compared to other industries. One can count on the deregulation of government policy, emerging technology, merging and acquisition (M&A), ever changing customer demand and now telecommunications companies even have to look for new business opportunities in all markets, all over the world in order to gain economy of scope and to continue survive in the competitive environment. While doing this, telecommunications company also need to defend their own market space against new competitors entering from the other parts of the world.

As the operating landscape of telecommunications company is getting more turbulent, management decisions has become more and more complex. This is due to the fact that the number of factors influencing the success or failure of a business strategy rises dramatically. Consequently, the decision makers find themselves confronted with huge amount of data in making decision. Therefore, it is an urgent need to explore a more effective approach to supply intelligence for planning and decision making. In order to work towards the most appropriate approach in organizing competitive intelligence in telecommunications company, this work will cover with a study on the current competition status in Malaysia.

1.1 Competition Landscape

The local telecommunications industry has undergone several rounds of consolidation over the years. From as many as 8 major operators at one time, the industry is currently dominated by 3 operators, namely Telekom (inclusive of subsidiary Celcom), Maxis and DiGi. All these companies have dual responsibilities as both infrastructure and service providers. Besides the top three, this industry is opened up to emerging operators like Time dotCom, UMobile and few MVNO² resulting from the current market liberalization which eventually makes the competition more intense. Competition among operators gravitates at the price plan that fierce price war is taking off among them in order to capture every possible market share.

All telecommunications company in Malaysia are operating under a regulator body that drafts the policies, direction and governs the growth of communication and multimedia sector. The primary role of the Malaysian Communications and Multimedia Commission (MCMC) is to implement and promote the national policy objectives for the Communications and Multimedia sector set out in the Communications and Multimedia Act 1998 (CMA). The MCMC is also charged with overseeing the new regulatory framework for the converging industries of the telecommunications, broadcasting and online activities, as well as postal services and digital certifications.

² Mobile Virtual Network Operator can provide mobile telephony services to its customers via others network but without having its own radio spectrum or network infrastructure like base stations.

Market overview³

Mobile or cellular communication is the core revenue source for all the telecommunications company in Malaysia. This business line represents the strong growing engine compared to down-trends fixed line business. Almost 76.3% of the 26 million population in Malaysia had a mobile telephone service by 2006 as shown in Figure 1-1. This meant Malaysia had the second highest mobile penetration in ASEAN after Singapore. The country passed the milestone of 20 million mobile subscribers in 2006, up from only two million in 1998. Figure 1-2 tells that in term of user trend, prepaid is still the payment plan of choice over postpaid which accounted for 83% of total mobile subscription in 2006. More market information is included in appendix A.

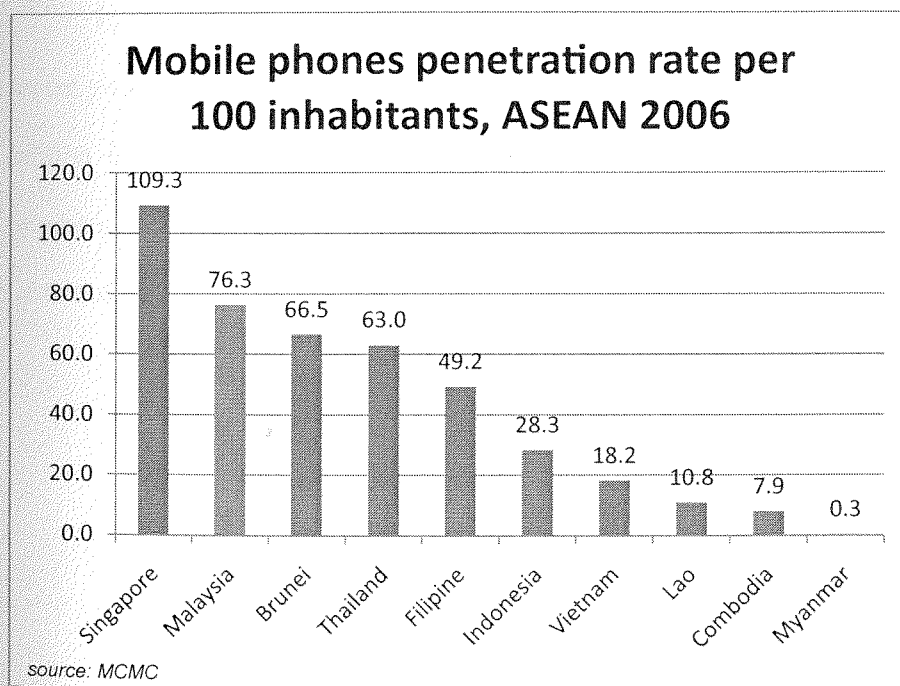


Figure 1-1 Mobile Phone Penetration Rate for ASEAN

³ The statistic are obtained and adapted from MCMC web site <http://www.skmm.gov.my>

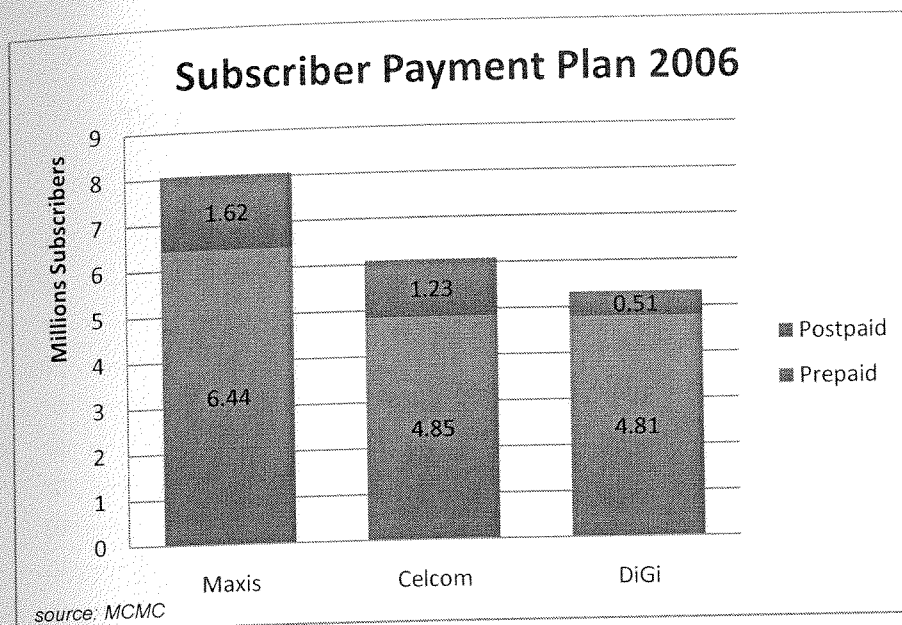


Figure 1-2 Payment Plan for Mobile Subscribers

In contrast, the fixed-line services did not grow in such a drastic manner in the recent years (Figure 1-3). Having moved rapidly from around 2 million in 1990 to 4.7 million in 2002 (penetration approaching 20% at the time), fixed-line subscriber numbers dipped to 4.6 million by end-2003 and were sitting at 4.3 million (penetration rate at about 16 per 100 inhabitants) by the third quarter of 2007.

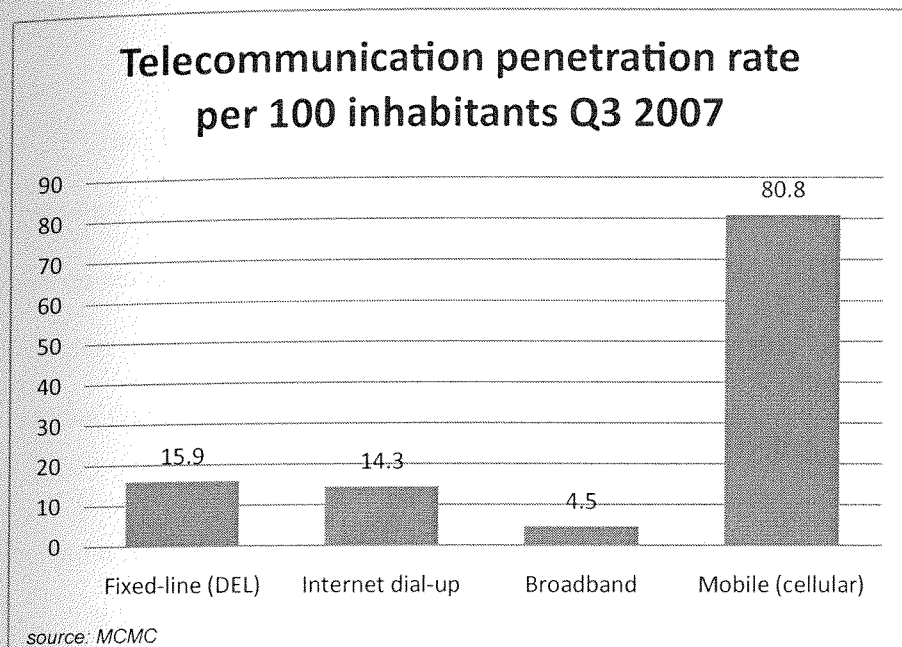


Figure 1-3 Telecommunication Penetration Rate in Malaysia

Over the last year or two, the broadband Internet market was finally starting to see a major surge in growth. The penetration rate is growth in a high speed with penetration rate 2.8 per 100 inhabitants in 2006, according to the regulator's published figures. In 2007, penetration rate was approaching 4.5 per 100 inhabitants. This represented a household penetration of around 15%. However, Malaysia remained well behind the regional leaders where broadband household penetration was typically running at above 50%. Among the technology medium, Malaysia broadband market has continued to be dominated by services based on DSL technology.

1.2 Company Profiles

The big three telecommunications companies, Telekom Malaysia (with subsidiary Celcom), Maxis Communications and DiGi have almost covered the entire telecommunication market in Malaysia. The following information provides a brief overview of company profiles, their business and market position so that it can broaden the understanding of local competition status.

Telekom Malaysia

It is the biggest and oldest telecommunications company in Malaysia with the core fixed line business diversified into mobile. This government controlled operator continues to dominate the fixed line market with 88% of total domestic service revenue. Its Celcom subsidiary serves up to 31% of cellular market share. In the recent year, it has been expanding its business internationally for the higher growth looking at the threatened traditional fixed line business and the saturated domestic mobile market. The revenues from its foreign operations in Indonesia and Bangladesh now represent a quarter of the company's total revenue.

In the fixed-line market, its major competitors are TIME dotCom and Maxis, whereas in the cellular or mobile sector, it shares the pie with Maxis and DiGi (Figure 1-4). Telekom Malaysia and Maxis each received third-generation (3G) W-CDMA⁴ licenses in 2003 and both companies began offering commercial services in 2005.

⁴ Wideband Code Division Multiple Access is a wideband radio transmission technology for 3G

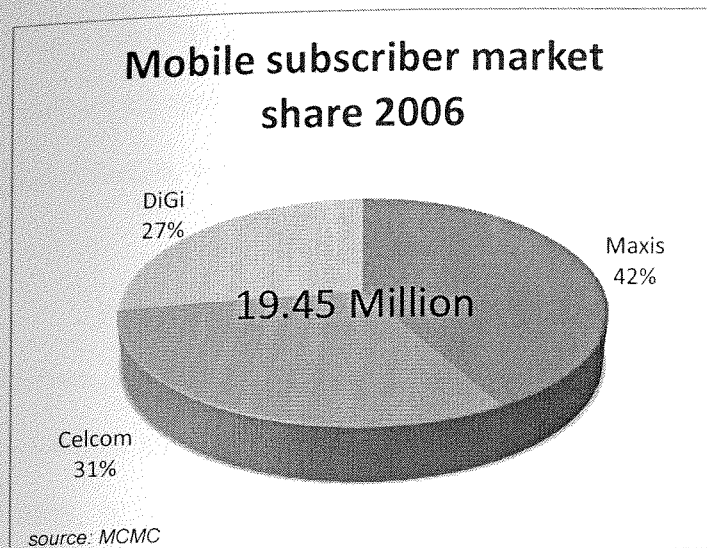


Figure 1-4 Market Share

Telekom Malaysia dominates the booming Internet sector, accounting for 56.5% of all dial-up subscribers and over 90% of all broadband subscribers by the end of 2005. Due to the changing consumer trends, fixed line penetration rate is expected to fall below 15% by the end of the decade (from 23%), resulting in a 7% fall in number of fixed line service over the five years period. Such decline triggers an alert to traditional revenue stream. The bright side is that supportive government policy and increasing consumer interest in data service have given a big boost to the broadband subscriber growth which may achieve 130% growth over the next five years.

Maxis Communications

Maxis is a locally owned mobile service provider in Malaysia telecommunications company market space. It remains Malaysia's cellular market leader which captures slightly more than 40% of the market share. The company was

founded in 1995 and first appeared on the Malaysian stock exchange in 2002 but it went private again in June 2007. Same as Telekom, it has diluted its business to India and Indonesia, with India operations starts to contribute strongly to company revenue.

It is one of the operators that awarded third-generation (3G) W-CDMA license. A variety of mobile communication products and services are offered to subscriber including prepaid call plans, monthly subscription plans, global roaming, MMS, WAP, Residential Fixed Line services, Broadband Internet plans, and 3G services to both pre-paid and subscription customers. For business customers, Maxis offer VSAT services (satellite based communications) and BlackBerry based mobile services in additional to regular services. Among all these services, one of the main revenue sources, the popular prepaid service has currently served over 6.3 million customers in Malaysia.

Today, Maxis saw the strong data revenue grow at 26% in 2007, largely driven by mobile SMS. Looking ahead, Maxis is upbeat on its mobile internet and broadband business and believes that this function will help driving data revenue as well as demand for 3G services. Aside from that, Maxis expects factors such as rising demand for faster access to data services as well as improving content (e.g. mobile gaming) to lead to a stronger take-up rates for its 3G services.

DiGi

DiGi is another aggressive mobile service provider in Malaysia telecommunications space with about 26% of cellular market share. It is the only foreign controlled telecommunications company in Malaysia with 61% stake owned

by Telenor, Norway. Though Telenor brought in experiences and competitive products to local market, DiGi neither secure a 3G nor the WiMAX licenses in order to roll out the broadband services. With this constraint, DiGi product offering was limited to voice services and SMS instead of broadband services supported by 3G technology. It is obvious that without 3G licenses, DiGi has stuck in a disadvantage position compared to its rivals Maxis and Telekom (Celcom). This is partly due to the barrier set by regulator and the political concern with the foreign ownership.

Currently, DiGi provides a variety of mobile communication services. These services include voice under their prepaid plans & postpaid plans, SMS, data plans and services, international roaming, international calling card and WAP services. The company strong subscribers' base increased was driven by innovative product offerings that were well received by the market. Up to now, DiGi remains a single-market operator as overseas expansions are generally undertaken by its parent company, Telenor.

Recently it went through a shareholders reshuffling exercise in order to comply with the new foreign ownership limit by reducing Telenor stake in DiGi to 49%. After long seeking of local partnership, finally it has come into an agreement to exchange the 3G spectrum from a local infrastructure provider, Time dotCom with DiGi shares hold by Telenor. DiGi is well-known by its brand and its strong management team, coupled with Telenor's experience, such move will definitely open up the new revenue stream in broadband data services and boost the future business growth.

1.3 General Issues in Telecommunications Company

The local telecommunication industry generally is operating in a highly competitive environment. Company strategy and direction is sensitive to several issues which are common to telecoms in Malaysia as well as those in other developing countries. These challenges shape the competitive landscape, affects the long term operating environment and impacts management decision, therefore they are worth to be concentrated in competitive intelligence study. Due to such reason, this section provides a concise description on the issues in regard of the trends and threats to telecommunication industry so that one can get more thorough overview of the competition landscape.

Being identified as the key driver of economy's growth momentum, the telecommunications industry is of strategic importance to the nation. As such, its operating landscape is largely shaped by the country's regulatory environment. Often, regulatory policies provide important insights into the level and speed of liberalization. Telecommunication companies therefore need a system to closely monitor and analyze the depth and speed of business impacts from regulatory amendment to the company business and its influence to long term company strategies at the market place.

In today's extremely challenging business environment, many telecommunications operators and carriers are measuring their success by the subscriber size and growth of their profit margins. As a result, carriers are under

intense pressure to reduce or eliminate the major threats to these slim margins including revenue leakages and frauds, inaccurate or missed inter-carrier billing, churn, inefficient network usage, and least-cost routing plans. These competitive and market pressures are also making the telecom industry reassess its business model and redefining the path that will return it to competitiveness and profitability. In addition, these trends and regulatory pressure shift the emphasis to customer service that did not exist before. The customer needs becomes the central focus of the service provider's activities. Customer requirements not only can determine service offerings, but also now influence telecoms network and affect the organizational structure of the company. Figure 1-5 shows the changing of competition landscape in this industry.

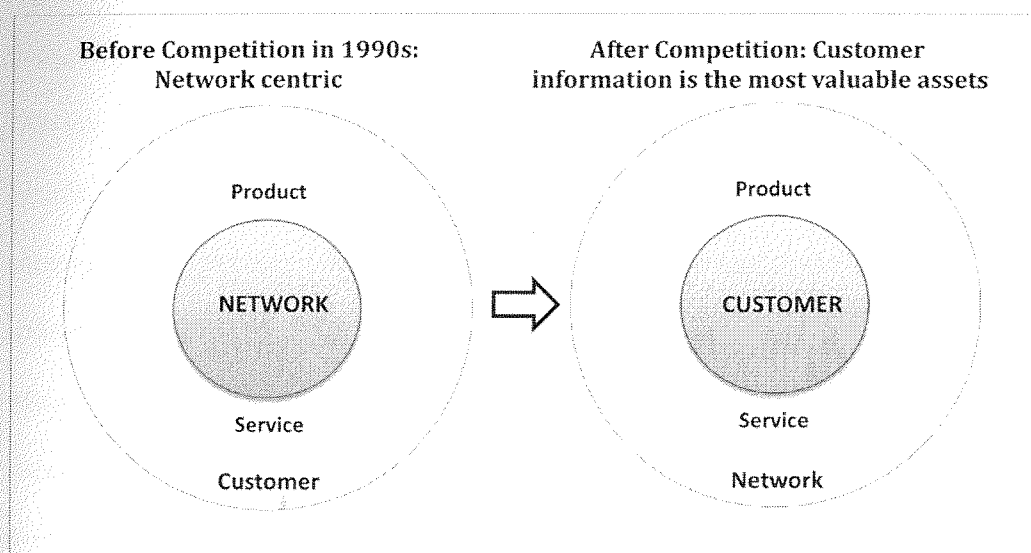


Figure 1-5 Shifting of Telecom Competition Landscape

Most information systems at telecommunications companies were built around the network centric business model. This has resulted in a variety of product-oriented systems (e.g. billing, CRM, service provisioning, marketing) that effectively run day-to-day operations. With the fraction of multiple systems and inflexible network

centric IT infrastructure, service providers struggle with their existing patchworks of general-purpose information solutions to store and analyze the mountains of data they create every day. These huge dynamic business related data will continue to grow exponentially as new services and as IP-based traffic increases. The ever-expanding volume of data puts a limit on the performance capabilities of today's information framework that can provide the integrated source to CI analysis.

Technologies and business models change unexpectedly in this industry, forcing established players to adapt their offering and strategies. Revenue stream of service providers have shown a quick change from voice traffic to IP-based data traffic in recent years. The latest generation of communication technology is moving toward broadband IP Multimedia System (IMS) that allows applications and services running on any IP devices from anywhere with the potential combination of wireless broadband technology such as WiMAX⁵ and W-CDMA technology to go beyond current 3G standard. This architecture requires a brand new communication infrastructure to support data-based business but telecommunications companies in Malaysia are still far reaching there yet. The rapid move from offline to online and from narrowband to broadband in wireless demand complicates the technology assessment. In many such transitions, telecoms have to bear the risk and to bet for the best business model, its top managements are always confronted with large amount of information in making a correct decision.

On the other side, liberalization of telecommunication industry also invites consolidation across the globe which involving technology suppliers. These Merger

⁵ World Interoperability for Microwave Access is a broadband wireless access solution

and Acquisition (M&A) activities could create two possibilities; either jeopardizes the current company competitive advantage due to the high risk and uncertainty of expensive infrastructure investment or bringing in the new opportunities to company due to new synergy created by suppliers. Knowledge about suppliers and actionable intelligence is crucial to protect company from making inappropriate decision.

The push for operators to seek overseas investments becomes stronger as opportunities in the local market get stiffer. This scenario becomes more likely as the local market approaches maturity, as indicated by the slower penetration rates, significant drop of average revenue per user (ARPU) and smaller increments in revenue. Most of the larger telecommunications companies have now invested abroad – to reap the benefits of strategic alliances and to participate in the perceived growth opportunities. On top of that, there is also a great push to invest in the new growth area locally through M&A. Each investment will have different risks and opportunities compared to the incumbent's traditional activities and, as such, these diversification strategies may alter its overall risk profile and need detail due diligence study.

Telecommunication companies compete for subscribers in various aspects – pricing, services and features, technical quality and reliability, as well as network capacity and coverage to maintain their competitive edge. As the mobile market approaches saturation point, rivalry will become even more intense with aggressive customer-pinching among the networks. In general, they need more quality information regarding the customer behavior, market trends, ARPU, churn rate and network capacity to determine a better market proposition. Competitive landscape in

Malaysia is foreseeing next wave of transformation with the enforcement of Mobile Number Portability (MNP) policy where a mobile subscriber can retain the same mobile number even if the user changes the service provider. In addition to this, industry liberalization by allowing MVNO invites more and more service providers entering the already congested market space. All these forces mold the telecommunications company business towards customer centric model. Eventually service quality and customer requirements fulfillment are the de facto to retain customer loyalty. Telecommunications companies in Malaysia have now reached a stage on how to efficiently gain insights into a huge volume of customer data in formulating strategies, to defend their market share, and to differentiate themselves from others by offering innovative products that can fulfill market needs.

The summary of general issues and the most seeking management needs can be consolidated in table 1-1 below.

Table 1-1 Summary of Issues and Management Needs in Telecom

	Issue	Management Needs
1	Regulatory policy amendment	Monitoring and assessing the impact of policy change in term of depth and speed to business
2	Changing of competition landscape which redefine business model toward customer-centric	Information framework that can integrate all the native systems and provide a centric view
3	Future uncertainty emerged from the transformation of voice traffic to IP-based traffic	Intelligence to support strategic, tactical and operational decision

	Issue	Management Needs
4	Impact from technology evolution such as IMS, WiMAX, 3G, 4G and etc	Technology assessment in identifying the opportunities and threats
5	M&A activities in local and foreign country	Due diligence analysis on target company and country risk profile
6	Conflict of interest created by solution providers, suppliers and vendors consolidation.	Analysis of market trends, supplier's movement to support various type of decision making needs.
7	Drop of ARPU, high churning rate and highly tailored market positioning	Customer insight captured in the disparate applications in telecoms
8	Emergence of new entrance, MVNO and increase competition (e.g. MNP, price war)	Competitor profiling, marketing strategy of rivals, competitor's movement

1.4 Purpose of Research

As the need for an improved information supply became a necessity in decision making, Competitive Intelligence (CI) programs and activities should gain more attention from local telecommunications company. The objective of this work is to study the current state of CI in domestic telecommunications company, identify the application domain of the CI program, evaluate the gaps between current situation and the best practices, and then recommend an appropriate CI program agenda in relevant to the local context that can serve as a comprehensive intelligence platform to give insights of the business, spur innovation for continuous growth and alert top management on the critical topics in strategic decision making. Two research questions were formulated:

1. *What is the CI status of telecommunications companies in Malaysia?*
2. *How should CI be organized to gain and sustain competitive advantage of telecommunications companies in Malaysia under their operating environment?*

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